

# P | Cabling

## Data sheet

**M12 Sensor/actuator cable, A-coded, 2.0 m,  
M12 jack straight - free line end,  
unshielded, 5-pole, PUR**

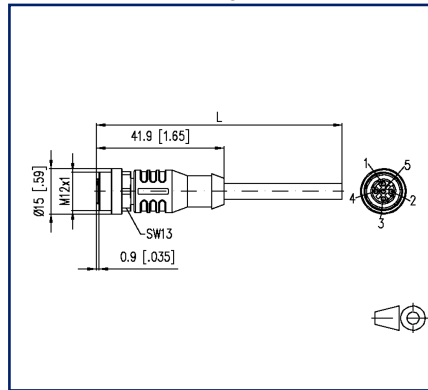
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P/N  
**142MDA20020**  
EAN **4251394646916**  
2023/05/22  
Version: A

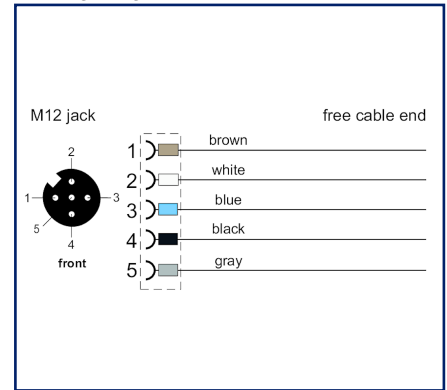
### Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

### Product specification

Flexible, silicone- and halogen-free control cable with high mechanical strength. The cable is resistant to chemicals, hydrolysis and microbes. The drag-chain application is possible at a bending radius of minimum 10xd. Due to its weld-field immunity, the cable is very well suited for the flexible application in robotics, machine tools and metal-cutting production. The cables meet the UL and CSA (UL10493/20549; cULus) requirements. Special features: flame retardant, seawater resistant, recyclable, LABS free, RoHs compliant, acid and alkali resistant, ozone resistant, UV resistant, hydrolysis proof, drag chain resistant, torsion resistant, welding sparks resistant, halogen free, silicone free, oil resistant

- Standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m.
- Other cable lengths on request.

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## Technical Data

### General Data

Fields of application	Industrial Ethernet
Design	Sensor/actuator connection cable M12, A-coded
Shielding	unshielded
Transmission technology	Copper
Color coding fiber/ wire(s)	brown, white, blue, black, gray
Color	black
Dimensions	
Dimension - Interface 1 (L x W x H)	41.9 mm x 15 mm x 15 mm
Dimension - Interface 1 (L x W x H)	1.65 in. x 0.591 in. x 0.591 in.
Cable length (m)	2 m
Cable length (ft)	6.56 ft
Labeling option	identification label carrier

### Connections/interfaces

Connector technology interface 1	M12-jack
Connector technology interface 2	free line end
Coding interface 1	A-coded
Number of positions/contacts interface 1	5
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 22/42
Conductor cross section, stranded wire	0.34 mm <sup>2</sup>
Stranded wire structure	42x0.10mm
Cable sheath diameter (min. - max.)	
Cable sheath diameter	5.2 mm
Cable sheath diameter	0.205 in.

### Electrical characteristics

Current carrying capacity	4 A at 40 °C
Rated voltage	60 V
Insulation resistance	min. 100 MOhm

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### Mechanical data

Life - Number of mating cycles	min. 100
Torsion	+/-180°/m, < 1 million cycles
Maximum operating bending radius	52 mm
Alternating bending radius	52 mm
acceleration	5 m/s <sup>2</sup>

### Materials and material properties

Material - Conductor	Cu (copper)
Material - Conductor Insulation	polypropylene
Material - Cable jacket	PUR
Material - Body interface 1	Plastics
Material - Protective housing interface 1	FPM/FKM
Material - Contact interface 1	CuSn (tin bronze)
Material - Contact finish interface 1	Au (gold)
Material - Contact carriers interface 1	Plastics
Material - Union nut interface 1	CuZnPb (brass)
Material - Union nut finish interface 1	Ni (nickel)
Flame retardancy	yes
Halogen free	yes
Oil resistance	yes
UV-resistance	yes
drag chain suitable	yes
torsional	yes
RoHS	compliant

### Environmental conditions

Temperature (min. - max.)	
Temperature - Operating °C	-50 °C - 90 °C
Temperature - Operating °F	-58 °F - 194 °F
Temperature - Installation °C	-30 °C - 90 °C
Temperature - Installation °F	-22 °F - 194 °F
Temperature - drag chain °C	-25 °C - 60 °C
Temperature - drag chain °F	-13 °F - 140 °F

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### Environmental conditions

Particulate ingress interface 1	IP6X when plugged in
Liquid ingress/immersion interface 1	IPX5, IPX7, IPX8 when plugged in
Pollution degree interface 1	3

### Approvals

UL listed (file no.)	Approval pending
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### Standards/Regulations

Connectors for electronic equipment	
circular connector	DIN EN 61076-2-101

### Classifications

ETIM 5.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855
ETIM 8.0	EC001855
ETIM 9.0	EC001855

### Packing details

Type of packaging	1 pc(s) / plastic bag
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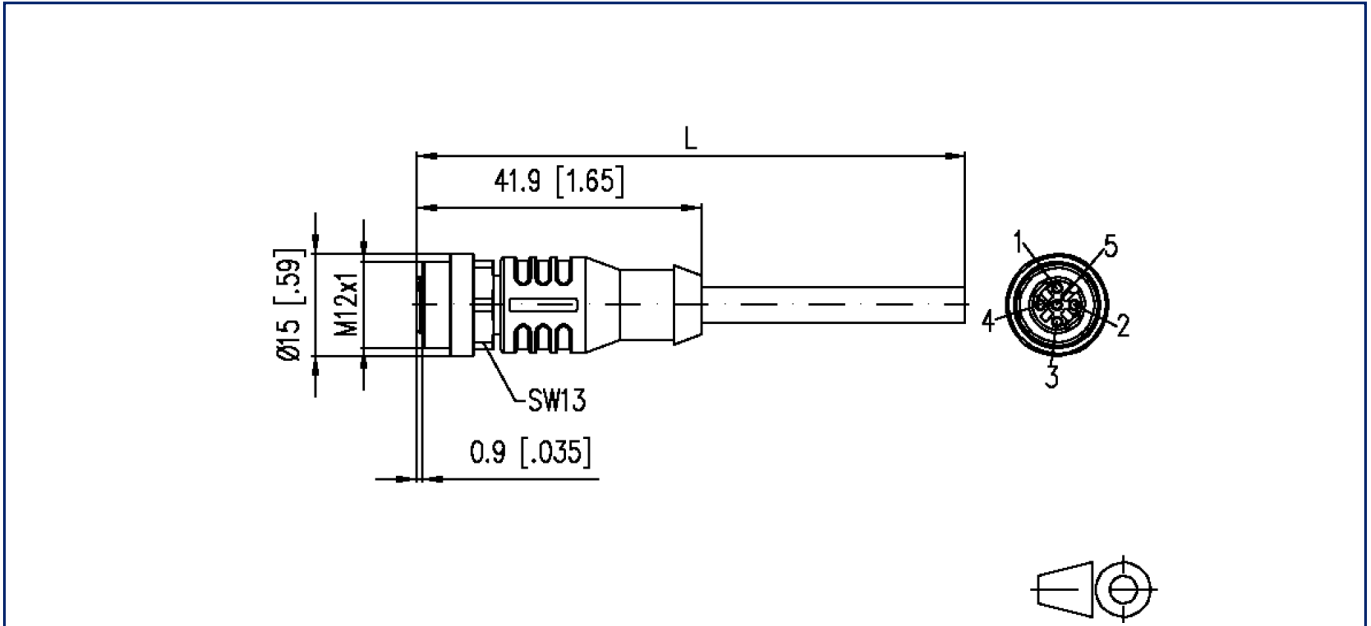
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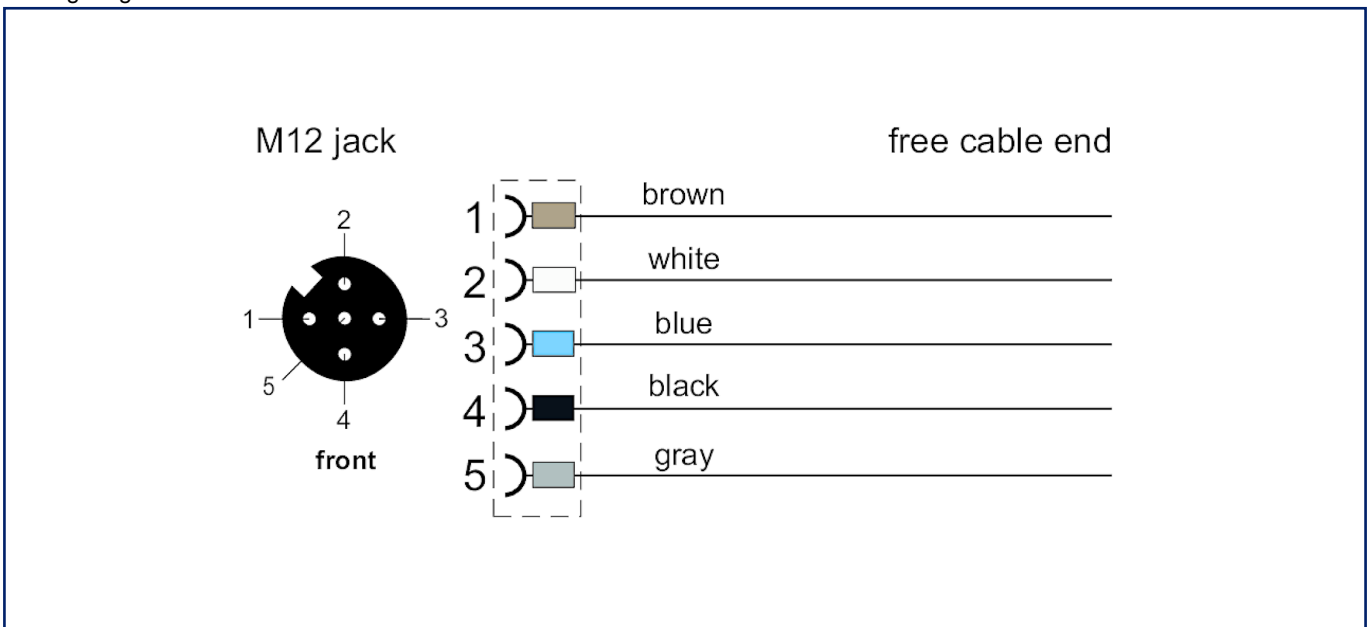
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## Illustrations

Dimensional drawing



Wiring diagram



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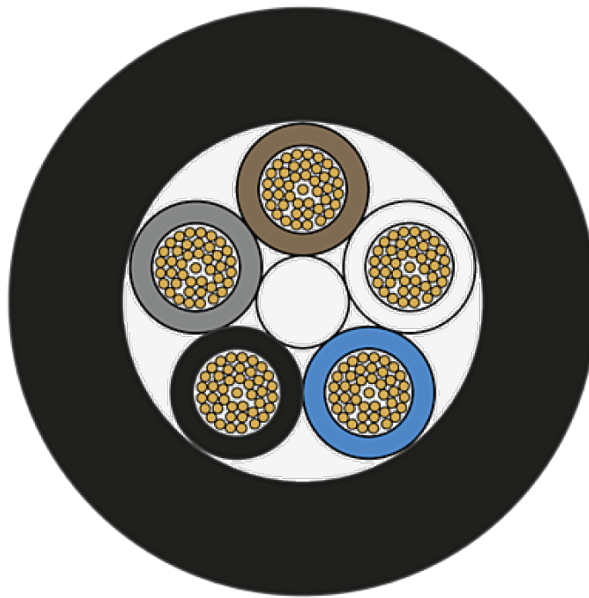
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Principle diagram



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